Docket No.: 200300640-1

5

(10) ABSTRACT

Methods and apparatus are described for a rewritable disk memory using an electro-optical molecular recording layer. In the manner of nanotechnology, each molecule is an individual multi-position switch having at least two distinct optical characteristic states. Localized electrical field injection is used to switch each molecule to one of at least two bistable position states such that each is representative of a storable data bit.